REMARKS

Claims 1, 2, 4-15, and 18-20 were pending in the present Application prior to entry of the RCE. Examiner has found Applicants' arguments advanced in Applicants' After Final Amendment of April 26, 2010 unpersuasive and has maintained the Final Rejection. Applicants have filed the present RCE and Amendment and after entry of the present Amendment there shall be 3 independent claims and a total of 19 claims pending in the present Application. Claims 4, 10, and 11 have been cancelled without prejudice in the present Amendment and new claims 21-25 have been added.

In the Final Office Action of February 25, 2010, Examiner rejected claims 1, 2, 4-13, 15, and 18 under 35 U.S.C.§102(b) as being anticipated by U.S. Patent No. 6,470,329 to Livschitz ("Livschitz"). Livschitz is directed to methods of synchronizing data sets stored in distributed memories. Livschitz teaches several embodiments of synchronization methods, the most basic of which are shown in Figs. 1-3. "[T]he method for synchronizing two data sets comprises computing a signature for a first data set in a first address space and a signature for a second data set in a second address space using a one-way hash function. The method further includes comparing the signatures for the first and second data sets to determine whether they are identical. If the signatures are not identical, the method further includes identifying an area of difference between the first data set and the second data set and transferring data corresponding to the area of difference between the first data set and the second data set from the first data set to the second data set." Col. 2, lines 39-50. When the

data sets are large, the data sets can be subdivided into elementary data blocks and the hash signatures of the respective data blocks are compared. See col. 2, lines 51-64 and col. 6, lines 13-37.

Livschitz also teaches that different hash functions, "H" and "G" may be used in data synchronization. One embodiment disclosed by Livschitz proposes to "subdivide the first data set into elementary data blocks, compute a signature for each elementary data block using a first one-way hash function, store the signatures of the elementary data blocks in a first array, and compute a signature for the first array using a second one-way hash function." Col. 3, lines 58-63. A more detailed description is found regarding Fig. 7. "[T]he signature of each elementary data block 42, 44 of the data sets A and B are computed upfront, as indicated at 52 and 54, and stored in arrays hA and hB in address spaces M1 and M2, respectively. Unique signatures are next found using a process similar to the one described in FIGS. 1-4...A hash function G operates on the arrays hA and hB to produce the signatures g(hA) and g(hB). Typically, the hash function G will be different from the hash function H...[T]he process then proceeds to isolate the elements of the arrays hA and hB that are different. A recursive process similar to the one illustrated in FIGS. 2 and 3 is used to isolate the elements of the arrays hA and hB that are different." Col. 7, line 66 - col. 8, line 19.

In the Advisory Action of May 6, 2010, it appears that Examiner interprets Applicants' "...first and second hashes, which are computed using first and second types of hash techniques respectively..." as being equivalent to Livschitz' recursive hashing of smaller and

smaller data blocks using the same hash function, "H", as illustrated in Figs. 1 to 3 and described in associated text. That is, a "first" hash is taken from the entire block of data (Fig. 1) – the "first hash technique". A "second" hash is taken from a subset of the entire block (Fig. 2) – the "second hash technique", etc.

Applicants have amended the claims to clarify the distinction between Applicants' claimed invention and the disclosure of Livschitz. Applicants' independent claims require that the first hash technique be of a first computational intensity and based upon database values of the mobile-copy database and that the second hash technique of a second computational intensity and based upon the database records in the mobile-copy database. Applicants' claimed invention employs different features of the database as subjects for the first hash and the second hash. See Applicants' specification, paragraphs [0017], [0041], [0046], and [0048]. Livschitz simply subdivides the same feature of the database for first, second, etc., for hash. Since Applicants have expressed the desire that communications be "...carried out in manners that require lessened amounts of channel capacity to carry out the determination process and place the databases in match with one another" (paragraph [0016]), Applicants' second hash is computationally more intense and requires a greater amount of communication channel capacity to communicate than the first hash. See paragraph [0021]. Unlike Applicants' claimed invention, Livschitz teaches that the recursive hashing using the same function stays computationally of the same intensity or becomes less intense with each repetition (Figs. 1 to 3), thereby implying a ***reduction*** in channel capacity needed for each subsequent hash.

With regard to Livschitz' use of two different hashing functions, H and G, illustrated in Figs. 7 and 8 and described in associated text, Livschitz teaches taking a hash from a part of a database and then taking a hash of an array formed from the hashes. The methods of Livschitz and that claimed by Applicants are significantly different in this respect. Moreover, Applicants' claimed invention requires that the formation of the second hash is dependent upon a finding that there is a mismatch between the mobile-copy and network-copy first hash. Livschitz' technique using functions H and G does not teach this dependency. Livschitz takes a first hash, stores it as an array, and takes a second hash; there is no conditional requirement for the taking of the second hash.

The hallmark of anticipation is a finding of prior invention. Accordingly, the standard of rejection for §102 anticipation requires that the single reference must teach every aspect of the claimed invention either explicitly or impliedly, and in the same arrangement as found in the claim. See MPEP §706.02. As discussed above, Livschitz does not disclose significant elements of Applicants' claimed invention. Since Livschitz does not teach Applicants' claimed invention, a §102 rejection is improper and the independent claims 1, 15, and 23 are believed allowable. Claims 2, 5-9, 12, 13, 18, 24 and 25 are dependent upon a presumed allowable independent claim and are therefore, themselves, believed allowable. Claims 14, 19, and 20, rejected under a §103 theory are also dependent upon presumed allowable independent claims and are also therefore presumed allowable.

Accordingly, Applicants believe the present Application to be in a condition suitable for allowance. Examiner is respectfully requested to withdraw the §§102 and 103 rejections and pass the present Application to allowance.

Respectfully submitted,

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